



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/691,228 | 10/22/2003 | Mark J. Nimmer | 02CR340/KE | 5998 |

7590 04/05/2005

Attention: Kyle Eppele
Rockwell Collins, Inc.
M/S 124-323
400 Collins Rd. NE
Cedar Rapids, IA 52498

EXAMINER

WU, XIAO MIN

ART UNIT PAPER NUMBER

2674

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

54

Office Action Summary

Application No.

10/691,228

Applicant(s)

NIMMER ET AL.

Examiner

XIAO M. WU

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, the recitation of "size" should be --side--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (US 2003/0122748) in view of Nakamura et al. (US Patent No. 5,049,865)

As to claims 1, 10, 13, 18, Ho discloses a passive matrix organic light emitting diode display system comprising: a plurality of pixels (10, Fig. 1) configured for emitting light when energized by one of a plurality of row electrodes and one of a plurality of column electrodes; a plurality of column drivers (Q1, Q2, Q3, Fig. 1) configured for energizing the plurality of column electrodes; a plurality of row drivers (Q4, Q5, Fig. 1) configured for energizing the plurality of row electrodes. It is noted that Ho does not specifically disclose at least two of the plurality of row drivers are configured to simultaneously energize at least two of the plurality of row of electrodes.

Nakamura discloses a matrix type of the flat panel display device similar to Ho. Nakamura further discloses two of the plurality of row drivers (32, 42, Fig. 1) are configured to simultaneously energize at least two of the plurality of row of electrodes (e.g. odd numbered scanning electrode and even numbered scanning electrode, see abstract and Figs 8A-8O). It would have been obvious to one of ordinary skill in the art to have modified Ho with the features of simultaneously energizing two row electrodes as taught by Nakamura so that two different scanning modes can be obtained.

As to claims 4, 7, 20, 21, Nakamura discloses at least three or four of the plurality of row drivers are configured to simultaneously energize at least three or four of the plurality of row electrodes ((col. 3, lines 1-6).

As to claim 3, Nakamura discloses at least two of the plurality of row drivers are configured to be activated at the same time (see abstract).

As to claim 4, Nakamura discloses at least two of the plurality of row drivers are active per duty cycle of the display system.

As to claim 5, Nakamura discloses at least two of the plurality of drivers are multiplex (col. 1, lines 15-20).

As to claims 6, 11, 19, it is considered as an obvious design choice to have two row drivers on the same side of the display because the location of the row driver does not solve any stated problems and have any unexpected results.

As to claim 8, the number of the column electrodes is considered as an obvious design choice because it depends what size of the display is desired.

As to claim 9, Ho discloses that each of the plurality of column electrodes are electrical contact with only one of the plurality of pixels (see Fig. 1).

As to claim 12, Ho discloses energizing the first column driver (Q1) and the second column driver (Q2) comprises energizing the first column driver (Q1) and the second column driver (Q2) on the same side of the display system.

As to claim 14, Ho discloses the means of emitting light comprises a plurality of pixels (see Fig. 1).

As to claims 15-17, Ho discloses energizing first row and second row and first column and second column drivers (see Fig 1).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

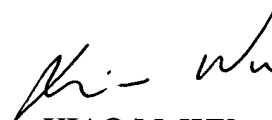
The US 4,602,292, 5,206,634, 5,392,058, 5,982,345, 2003/0122751 and 2005/0052141 are cited to teach a flat panel display device.

Art Unit: 2674

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571 272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PATRICK EDOUARD, can be reached on 571 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



XIAO M. WU
Primary Examiner
Art Unit 2674

x.w.

April 3, 2005